

*THE EFFECTS OF ESTABLISHING OPERATIONS ON
PREFERENCE ASSESSMENT OUTCOMES*

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Preference assessments were conducted for 4 individuals with developmental disabilities across conditions of (a) control, allowing equal access to all stimuli prior to the preference assessment; (b) deprivation, allowing no access to one stimulus for 48 hr prior to the assessment; and (c) satiation, allowing free access to one stimulus for 10 min immediately prior to the assessment. Deprivation resulted in increased preference, whereas satiation resulted in decreased preference compared to control conditions.

DESCRIPTORS: preference assessments, establishing operations

Over the past two decades, a number of preference assessment procedures that reliably identify reinforcers for individuals with severe disabilities have been developed (e.g., DeLeon & Iwata, 1996; Fisher et al., 1992). Although the efficacy of these procedures is well documented, few studies have examined how often and under what conditions preference assessments should be conducted. There is limited evidence that procedural manipulations influence outcomes; for example, food items displaced nonfood items when items of both categories were mixed during assessments (DeLeon, Iwata, & Ros-

coe, 1997). Other variables may influence the results of preference assessment outcomes. Establishing operations (Michael, 1982) may affect assessment outcomes, but they have not been studied in this context to date. The present study examined the effects of deprivation and satiation on the results of preference assessments.

METHOD

Four individuals enrolled in our behavioral residential program participated. Ethan (11 years old) had been diagnosed with muscular dystrophy and autism. Daniel (11 years old) had been diagnosed with autism and a seizure disorder. Mark (6 years old) and Ashley (7 years old) had diagnoses of autism. Sessions were conducted in an unoccupied room at the participants' residence, 5 to 7 evenings per week, approximately 1 hr after the evening meal.

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Prior to the start of the study, a stimulus preference assessment was conducted using the procedures described by Fisher *et al.* (1992). Eight edible items were presented in pairs to each participant, and the percentage of approach responses was calculated for each stimulus. Approach was defined as reaching towards and picking up one item; reaching for more than one item at a time was blocked. The student was allowed to consume the item chosen. To control for possible ceiling and floor effects, the two most and two least preferred stimuli were discarded; the four middle-ranked items for each participant were selected for inclusion in this study.

During the study, stimulus preference assessments (Fisher *et al.*, 1992) were conducted with the four edible stimuli identified for each participant. Preference assessment sessions involved the presentation of 24 stimulus-pair combinations, and occurred under three experimental conditions. In the control condition, access to each of the four edible items was regulated for 24 hr prior to the preference assessment by only allowing the participant access to premeasured portions of each stimulus at three scheduled times. In the satiation condition, an identical 24-hr period of regulated access to all four stimuli was followed by a 10-min period of free access to one of the stimuli. In the deprivation condition, the participant received regulated access to three of the four stimuli for 24 hr prior to the assessment and was deprived of the fourth stimulus for 48 hr prior to the preference assessment. For each participant, four preference assessments were conducted under deprivation conditions (one for each stimulus), four assessments were conducted under satiation conditions (one for each stimulus), and three preference assessments were conducted under control conditions.

Data were collected on the percentage of approach responses for each of the stimuli.

During 33% of sessions, a second observer independently recorded data. Interobserver agreement was calculated by dividing the number of agreements by the number of agreements plus disagreements and multiplying by 100%. Interobserver agreement for approach responses was 100%.

RESULTS AND DISCUSSION

Results are depicted in Figure 1. For Ethan, relative to control conditions, there was a higher percentage of approach responses for three of four stimuli following deprivation. Following satiation, the percentage of approach responses was lower for all four stimuli. Daniel's data showed that, relative to control conditions, the percentage of approach responses was higher for all four stimuli following deprivation, and the percentage of approach responses was lower for all four stimuli following satiation. For Mark, in comparison to control conditions, the percentage of approach responses was higher for all stimuli following deprivation and lower for all four stimuli following satiation. Ashley's data revealed that, relative to control conditions, the percentage of approach responses was higher for three of four stimuli following deprivation and was lower for three of four stimuli following satiation. Across participants, no generalized satiation effects were noted (*i.e.*, participants continued to approach and consume stimuli across assessments), and changes in approach responses following satiation and deprivation conditions were equally distributed across the other three stimuli. More systematic changes might have been observed if food categories had been selected more closely. That is, if satiation occurred with salty items, selection may have been displaced towards liquids. Similarly, if nonedible items had been included in the assessment, satiation on edible items may have led to a dis-

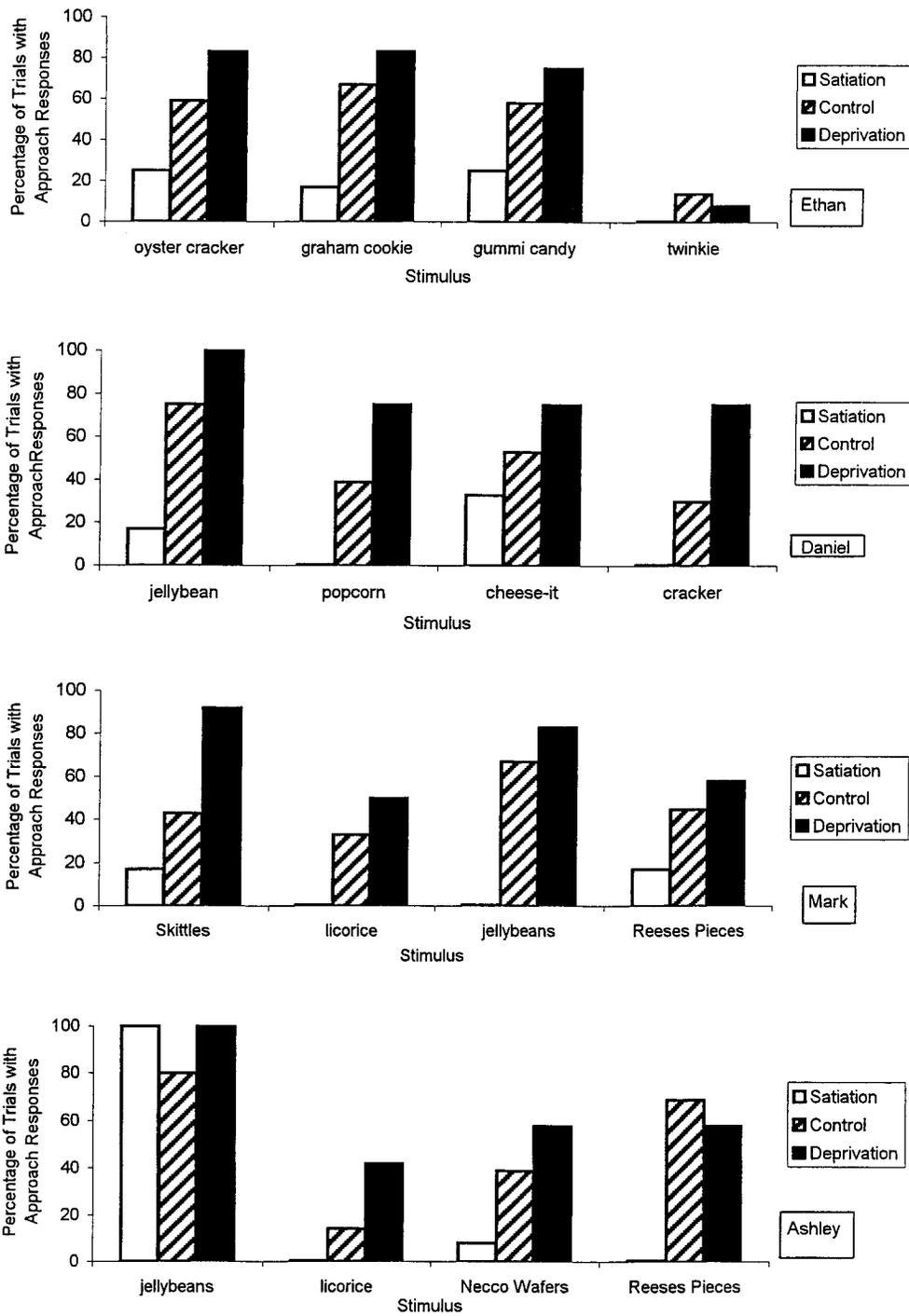


Figure 1. Percentage of approach responses across conditions for Ethan, Daniel, Mark, and Ashley.

placement of selection to activity or sensory stimuli.

These results demonstrate that deprivation and satiation can influence the outcome of preference assessments. This suggests that access to stimuli should be monitored prior to conducting preference assessments. Inadequate control of pre-session establishing operations could lead to functional reinforcers appearing as low-preference items during assessments. In addition, this study provides evidence to support the practice of reserving access to certain preferred stimuli for extremely important skill acquisition or behavior programs. The results also suggest that less preferred stimuli might serve as effective reinforcers in those settings if access were restricted.

Three limitations of this study were that only a small number of stimuli were assessed for each participant, only moderately preferred items were included, and the effectiveness of these stimuli as reinforcers was not assessed. Nonetheless, this study extends

previous findings on preference assessments by demonstrating that establishing operations may influence the results of preference assessments.

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